

REMARKS

Claims 1 and 4 to 15 are pending in the application; claims 2 and 3 are canceled.

Rejection under 35 U.S.C. 102

Claims 1-15 stand rejected under 35 U.S.C. 102(b) as being anticipated by *Brehm et al.* (US 5,615,860).

Claim 1 has been amended to include the features of claim 2 and 3 as well as features disclosed in the drawings and in the specification (see paragraph 0019). The bushing for a hydraulic valve now claimed comprises a bushing wall defining an interior of the bushing. The bushing wall has openings allowing passage of a hydraulic medium to and from the interior. Several of the openings are arranged adjacent one another in a circumferential direction of the bushing (see drawings). The openings, viewed in a cross-section of the bushing, have a first wall portion extending substantially radially and a second wall portion opposite the first wall portion, wherein the second wall portion is part of the molded bevel. Two of the openings neighboring one another in the circumferential direction are arranged such that the molded bevels are neighboring one another (see Figs. 2 and 6). The molded bevels facing one another are positioned at an acute angle to a radial plane of the bushing wall positioned centrally between the molded bevels facing one another (see Fig. 2; see paragraph 0019 of the specification). The acute angle opens radially inwardly toward the interior.

This configuration is shown in particular in Figs. 2 and 6. Fig. 2 shows the radial plane 16 and the molded bevels 15. Attached please find an enlarged copy of Fig. 2 of the present invention. Lines extending the wall portions of the molded bevels 15 in the section view have been added; the angle α between the radial plane 16 and the wall portion of the molded bevels are shown. Clearly, the angle α opens toward the interior of the bushing. The arrangement of two neighboring openings having wall portions neighboring one another positioned at an acute to a radial plane between the two openings is not shown in the cited prior art reference.

The configuration of the acute angle such that it opens inwardly is of utmost importance for the bushing of the present invention. As set forth in the specification (paragraph 0007), the opening wall of the openings is formed during molding as a molded

- 7 -

6/30/05: Amd for Ser. No. 10/709,375 - Inventor(s): Cornea et al. - Filing Date: 4/30/2004

bevel by a mold incline or mold draft. The openings can be produced in the blank without requiring mechanical post-processing steps by pressure diecasting or injection molding without requiring mold slides for producing the openings. Two-part molds can be removed from a cast part only when the openings extend in the radial direction or when slides are used. The prior art *US 5,615,860* has three openings aligned axially; in the circumferential direction, there is only one opening, respectively. Therefore, a two-part mold can be removed easily in the radial direction from the openings 29, 30, 31.

Normally, if several radially extending openings are to be produced about the circumference, the mold must be divided to match the number of radial openings to be produced: three radial openings require three mold parts; four radial openings require four mold parts. The other commonly employed solution is that of providing radially moveable slides; however, slide arrangements are complex and expensive.

The present invention now provides a different solution for molding with only two mold halves more than two openings. This is achieved in that the openings have one side that no longer extends radially but instead at an acute angle as described. The attached sketch I illustrates the problem in regard to radial openings when two mold halves are used. The cross-hatched radial portions illustrate the mold sections forming the openings within the molded part; the radial cross-hatched portions must be removed after molding. The removal direction is indicated by the arrows. The cross-hatched portions would be prevented from moving in the direction of the arrows because the molded part is in the way. The mold parts for forming the openings therefore would have to be in the form retractable slides. Sketch II shows the solution according to the invention: the openings (or the mold parts) no longer extend radially but are widened outwardly in the circumferential direction so that the wall of the opening proximal to the removal direction extends at an acute angle to a radial plane between the openings (see especially Fig. 2); the mold halves can be removed as such and no slides are required.

The present invention simplifies molding of bushings with several circumferentially arranged openings or bores. The molds do not need slides; a simple two-part mold suffices.

The present invention as claimed in claim 1 therefore is not anticipated nor obvious

in view of the cited prior art reference.

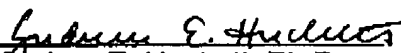
CONCLUSION

In view of the foregoing, it is submitted that this application is now in condition for allowance and such allowance is respectfully solicited.

Should the Examiner have any further objections or suggestions, the undersigned would appreciate a phone call or e-mail from the examiner to discuss appropriate amendments to place the application into condition for allowance.

Authorization is herewith given to charge any fees or any shortages in any fees required during prosecution of this application and not paid by other means to Patent and Trademark Office deposit account 50-1199.

Respectfully submitted on June 30, 2005,


Ms. Gudrun E. Hockett, Ph.D.
Patent Agent, Registration No. 35,747
Lönsstr. 53
42289 Wuppertal
GERMANY
Telephone: +49-202-257-0371
Facsimile: +49-202-257-0372
gudrun.draudt@t-online.de

GEH

Encl. Sketches I and II (1 sheet); marked-up copy of Fig. 2 (1 sheet)